

GUIDELINES FOR SAFE HANDLING OF DEAD BODIES DURING COVID-19

Khalid Alahmadi, Osama Alhijali, Fahad Alhijali, Essam Alahmadi, Mansour Alsihli,

Abdullah Salman & Yessr Almehmedi

Research Scholar, Specialized Dental Centre, KFH, Medina, KSA

ABSTRACT

In late 2019, the Wuhan Municipal Health Commission in China reported a cluster of 'pneumonia of uncertain aetiology' cases in Wuhan, Hubei Province. A new coronavirus was eventually discovered as the causal pathogen. The disease soon spread to more Chinese provinces, then the rest of the world, prompting the World Health Organization to proclaim it a pandemic. Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) was the virus's name, and COVID-19 was the illness (Coronavirus disease). Since then, the disease has claimed the lives of an increasing number of people. The disease's high contagiousness and rapid spread have been a source of concern, since it could put a strain on healthcare systems. As a result, strong infection prevention and control measures must be implemented to prevent the disease from spreading.

KEYWORDS: Safety, Measures, Covid 19, Buried, Funeral

Article History

Received: 06 Dec 2021 | **Revised:** 13 Dec 2021 | **Accepted:** 14 Dec 2021

INTRODUCTION

Coronavirus disease (COVID-19) is an infectious disease which was first reported by Wuhan Municipal Health Commission, China, at Wuhan, Hubei province in late 2019. The aetiological agent responsible was termed as Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). Globally, as of 8 June 2020, 6,931,000 confirmed cases of COVID-19 including 400,857 deaths have been reported to the World Health Organization (WHO). Among them, the highest number of confirmed cases has been recorded in the United States of America, amounting to 1,915,712. In India, the total confirmed cases are 256,611 and deaths reported are 7135. The case fatality report for COVID-19 is reported to range from 2 to 7%. As the case fatality rate is dependent on the proportion of deaths from a particular disease compared with the total number of people diagnosed with the disease for a certain period, the above-quoted values must be interpreted with caution. In countries where extensive screening has been performed in the whole population, overall case fatality rates of less than 1% have been reported because the denominator included many mild or asymptomatic cases. However, in countries where only people requiring hospital admission are screened, case fatality rates have exceeded 5%, because the denominator is much smaller 1-3.

With a growing number of deaths reported as a result of the pandemic, the International Committee of the Red Cross has warned that COVID-19-related deaths may overwhelm local ability to properly treat dead remains. It was stated that in order to avoid this risk, thorough preparation and planning are required in order to maintain the dignity of the

deceased and their remaining family.⁶ When dealing with the mortal remains of COVID-19 cases, it's critical to strike a balance between the family's rights and infection prevention and control procedures. Based on our current understanding of the condition, this article provides a narrative assessment of the currently available guidelines for the proper handling and treatment of deceased corpses in cases involving COVID-19⁴⁻⁶

The safety and well-being of the personnel involved in the care of COVID-19 victims should be a top priority. As a result, protocols should be implemented in accordance with the latest guidance and recommendations from national health authorities and international health organizations, particularly the World Health Organization (WHO). To ensure that deceased people and their families are protected and respected. To establish the dead's accurate identification, without which their correct documentation and traceability will be impossible to recover and identify in the future. When the authorities seek a medicolegal examination of death, the management of the dead from COVID-19 should not be a hindrance.⁷

So far, there has been no indication of SARS-CoV-2 transmission through the handling of deceased people's bodies. Although a case of COVID-19 has been reported in a forensic practitioner in Bangkok, Thailand's capital, no scientific evidence of disease transmission from the body has been found.⁸ COVID-19 virus is largely spread between persons by respiratory droplets and contact routes, according to existing findings. Airborne transmission was not recorded in a study of 75,465 COVID-19 cases in China. Airborne transmission is different from droplet transmission as it refers to the presence of microbes within droplet nuclei, which are generally considered to be particles <5 µm in diameter, that can remain in the air for long periods and be transmitted to others over distances greater than 1 m. In the context of COVID-19, airborne transmission may be possible in specific circumstances and settings in which procedures or support treatments¹⁻⁴

Personal Protective Equipment (PPE) Guidelines (PPE)

PPE is personal protective equipment designed to protect people's health by limiting their exposure to biological agents. Goggles, face shields, masks, gloves, coveralls/gowns (with or without aprons), head-covers, and shoe covers are all examples of PPE. The PPE should be worn is determined by the healthcare worker's risk profile. According to the Ministry of Health and Family Welfare of the Government of India, handling dead bodies in the mortuary poses a considerable danger, hence wearing a N95 mask and gloves is recommended. It is recommended that you wear a complete complement of PPE when doing an autopsy, which is a high-risk process.⁴⁻⁹

Personnel who engage with the body (e.g., healthcare or mortuary professionals, or the burial team) must follow basic measures, such as hand cleanliness before and after contact with the body and the environment, and wear appropriate PPE based on the level of contact. All tubes, drains, and catheters must be removed from the body. Any puncture wounds or holes (from the removal of the catheter, drains, tubes, or other sources) are cleaned with 1 percent hypochlorite and bandaged with impermeable material. To avoid the flow of body fluids, it is necessary to block the oral and nasal orifices. According to WHO norms, there is no need to sterilize the body before transferring it to the mortuary area, and no body bags are required. They may, however, be utilized for other purposes, such as if there is significant body fluid leaking. The body, however, must be placed in a leak-proof plastic body bag, according to rules released by the Ministry of Health and Family Welfare of the Government of India¹⁵. The body bag's outside must be decontaminated with 1 percent hypochlorite. A mortuary sheet or a sheet given by family members is then put around the body bag. After then, the body is either given over to relatives or transferred to a mortuary. If zipped body bags are not available, the body can be wrapped in a minimum of two layers of thick, leak-proof plastic sheets and taped together.¹⁰⁻¹²

All used or dirty linen should be placed in a bio-hazard bag and cleaned with hypochlorite solution on the bag's outside surface. As part of established infection prevention control methods, used equipment should be autoclaved or disinfected with disinfectant solutions. Biomedical waste management guidelines must be followed when handling and disposing of all medical waste.

Personnel participating in the examination and identification of human remains known or suspected to be infected with COVID-19 must wear protective equipment. Because remains contaminated with COVID-19 may offer a risk of cross-contamination to unprotected people, visual recognition by next of kin should be closely managed, and all relevant precautions, including the use of PPE, should be followed. 7 Samples – such as facial and numerous body pictures, fingerprints of both hands, scalp hair with the root extracted by forceps including the hair bulb for DNA analysis – should be maintained for eventual identification in the case of unidentified and unknown dead bodies.⁸

Embalming bodies infected with COVID-19 is not recommended, according to the WHO, in order to avoid unnecessary bodily modification.¹⁰ At the same time, certain countries have determined that it is possible to do so by using proper infection prevention and control precautions (including personal protective equipment) and avoiding aerosol-generating operations at all times during the embalming process.⁹

Cleaning the environment where the COVID-19-infected body was prepared with soap and water or a commercially prepared detergent solution is recommended first. Within 1 minute of exposure time, surface disinfection with 0.1 percent sodium hypochlorite with a contact time of 30 minutes or 62–71 percent ethanol dramatically lowers coronavirus infectivity on surfaces.¹⁰

People who have died from COVID-19 can be buried or cremated, according to WHO guidelines. After the body has been readied for burial, family and friends may view it according to their religious traditions. They should not, however, touch or kiss the corpse and should completely wash their hands with soap and water after viewing. Those in charge of depositing the body in the grave, or on the funeral pyre, should wear gloves and wash their hands with soap and water once the burial is over.¹²

The condition can have a significant psychological impact on bereaved families because the amount of time available before cremation is shortened, and the number of family members who can attend the funeral is limited. Inadequate information of how the disease is communicated and how infection can be prevented has resulted in victim and family stigmatization, to the point where opposition to the COVID-19 victims' burial has been reported.

If a suspected COVID-19 case is being autopsied, the recommended post-mortem specimen for testing is a nasopharyngeal swab and a lung swab from each lung. The collection of these specimens for COVID-19 testing may not be essential if the diagnosis of COVID-19 was established before death. After collecting, the specimens must be kept at 2–8°C for up to 72 hours. If there may be a delay in testing or transportation, specimens should be kept at –70°C or lower.¹³⁻¹⁴

CONCLUSION

The available guidelines for the safe handling of bodies infected with COVID-19 were reviewed in this article to assist body handlers who are likely to come into touch with them. The recommendations discussed are based on our current knowledge of COVID-19 and are subject to change if new information about the condition becomes available. The general public's awareness of proper handling techniques will go a long way toward reducing and alleviating the social stigma associated with COVID-19.

REFERENCES

1. Ontario Ministry of Health . COVID-19 guidance: Funeral and bereavement services [Internet]. Toronto: Ontario Ministry of Health; March 29 2020. http://www.health.gov.on.ca/en/pro/programs/publichealth/coronavirus/docs/funeral_bereavement_guidance.pdf (accessed 1 May 2020).
2. Public Health England. COVID-19: Guidance for care of the deceased [Internet]. London: PHE, 2020 March 31. <https://www.gov.uk/government/publications/covid-19-guidance-for-care-of-the-deceased> (accessed 1 May 2020).
3. Government of Canada. Interim guidance: Death care services and handling of dead bodies during the coronavirus disease (COVID-19) pandemic. <https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/guidance-documents/death-care-services-handling-dead-bodies.html.html> (accessed 1 May 2020).
4. Lobo, S. Mob denies burial to Chennai doctor after Covid-19 death, many ask is clapping hands enough. India Today [newspaper on the Internet]. 2020 April 21 [cited 2020 April 21]; News, <https://www.indiatoday.in/india/story/chennai-doctor-dies-of-coronavirus-denied-burial-10-points-1669313-2020-04-21>.
5. Nandakumar, P. Karnataka: Villagers oppose cremation of COVID-19 victim, body shunted around. The Week [Magazine on the Internet]. 2020 April 25 [cited 2020 April 25]; News, <https://www.theweek.in/news/india/2020/04/25/karnataka-villagers-oppose-cremation-of-covid-19-patient-body-shunted-around.html>.
6. Health and Safety Executive Advisory Committee on Dangerous Pathogens. The approved list of biological agents . <https://www.hse.gov.uk/pubns/misc208.pdf> (accessed 1 May 2020).
7. Osborn, M, Lucas, S, Stewart, R, et al. Autopsy practice relating to possible cases of COVID-19 (2019-nCov, novel coronavirus from China 2019/2020) <https://www.rcpath.org/uploads/assets/d5e28baf-5789-4b0f-acecfe370eee6223/fe8fa85a-f004-4a0c-81ee4b2b9cd12cbf/Briefing-on-COVID-19-autopsy-Feb-2020.pdf> (accessed 6 June 2020).
8. Hanley, B, Lucas, SB, Youd, E, et al. Autopsy in suspected COVID-19 cases. *J Clin Pathol* 2020; 73: 239–242.
9. Crossref / Medline
10. World Health Organization. Natural ventilation for infection control in health care settings. Geneva: WHO, 2009. <https://apps.who.int/iris/handle/10665/44167> (accessed 1 May 2020).
11. Lucas, S. Autopsies on people with high-risk infections. In: *The hospital autopsy: a manual of fundamental autopsy practice*. 3rd edition. London: Hodder Arnold, 2010.
12. PAHO . Dead body management in the context of the novel coronavirus (COVID-19). PAHO/PHE/IHM/Covid-19/20-002 (interim recommendations, April 7, 2020). <https://www.paho.org/en/documents/dead-body-management-context-novel-coronavirus-covid-19> (accessed 1 May 2020).

13. Centers for Disease Control and Prevention . *Interim guidance for collection and submission of postmortem specimens from deceased persons with known or suspected COVID-19*. USA: CDC, 30 April 2020. <https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-postmortem-specimens.html> (accessed 6 June 2020).
14. Cattaneo, C. *Forensic medicine in the time of COVID 19: An editorial from Milano, Italy*. *Forensic Sci Int* 2020; Apr 27: 110308.

